MODULE IV

STORAGE AND TREATMENT IN TANKS

IV.A. APPLICABILITY

IV.A.1. This module shall apply to all tank systems that store or treat hazardous waste. Table IV-1 contains a list of all permitted tanks and their features.

IV.A.2. The Permittee may store or treat, by evaporation, hazardous waste in six evaporation tanks with a total volume capacity of 326,000 gallons. These six evaporation tanks include four rectangular 21,000–gallon tanks and two circular 121,000-gallon tanks.

IV.A.3. The Permittee may also store hazardous waste in the Decontamination Pad Tank System, described in IV.A.4 subject to the requirements of Attachment II-1-6, *Leachate, Evaporation, and Decontamination Waste Management Plan*.

IV.A.4. The Decontamination Pad Tank System consists of a Decontamination Pad Settling Tank (inflow area) and a Decontamination Pad Supply Tank (outflow area). The total volume of the Decontamination Pad Tank System is 4,990-gallons.

IV.A.5. The Permittee may treat a maximum of 150 tons of hazardous waste per day in the tank systems located in the Mixed Waste Treatment Building. The Permittee may treat a maximum of 300 tons of hazardous waste per day in the tank located in the Mixed Waste Operations Building. The Permittee shall comply with the requirements of Attachment IV-1, *Tank Management Plan*; Attachment II-1-3, *Waste Stabilization Plan*; Attachment II-1-7, *Spray Washing Plan*; and Attachment II-1-12, *Thermal Desorption Separation Plan*.

IV.A.6. The Permittee may also treat or store hazardous waste in the following tanks:

IV.A.6.a. Waste Receiver Tank, 9,750-gallon capacity, Mixed Waste Treatment Building. This tank receives waste emptied from containers (including dump trucks and roll-offs) prior to treatment;

IV.A.6.b. Grizzly Tank, 900-gallon capacity, Mixed Waste Treatment Building. This tank provides containment for wastes that are separated by means of a grizzly;

IV.A.6.c. Wash/Sump Tank, 1,530-gallon capacity, Mixed Waste Treatment Building. This tank is a dual-unit tank used for spraying and washing large-sized wastes, debris, and waste from the Grizzly;

IV.A.6.d. Sizing Screen Tank, 900-gallon capacity, Mixed Waste Treatment Building. This tank provides containment for wastes that are separated using non-vibrating or vibrating screens;

IV.A.6.e. Primary Shredder Tank, 1,460-gallon capacity, Mixed Waste Treatment Building. This tank provides containment for a shredder that operates above the tank as part of the tank system;

IV.A.6.f. Secondary/Tertiary Shredder Tank, 1,180-gallon capacity, Mixed Waste Treatment Building. This tank system provides containment for the secondary shredder and tertiary shredder systems;

IV.A.6.g. Mixer Tank No. 1, capacity, 3,142-gallons, Mixed Waste Treatment Building. This tank system is used to mix wastes for stabilization and chemical treatment;

IV.A.6.h. Small-scale Mixer (portable);

IV.A.6.i. Drum Crusher, located in the Mixed Waste Operations Building;

IV.A.6.j. Thermal Desorption dryer, 550 gallon capacity, Mixed Waste Storage Building. This tank is where the separation of volatile contaminants occurs within the thermal desorption process;

IV.A.6.k. Thermal Desorption Condensate Tanks, 650 gallon capacity each tank, Mixed Waste Storage Building. This tank system consists of three identical tanks for the collection of thermal desorption byproducts (condensate and wastewater).

IV.B. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

IV.B.1. The Permittee shall store or treat waste according to the following conditions:

IV.B.1.a. The Permittee shall treat by evaporation only the waste codes in Condition III.B.1.a.;

IV.B.1.b. The Permittee shall treat those hazardous wastes listed in Condition III.B.1.a. in order to meet applicable treatment standards of UAC R315-13-1;

IV.B.1.c. The Permittee shall be prohibited from storing or treating in the evaporation tank systems hazardous wastes that are not identified in Condition III.B.1.a.

IV.B.1.d. The Permittee shall be prohibited from storing or treating in any tank system the wastes listed in Conditions III.B.2.b. and III.B.2.c.

IV.C. SECONDARY CONTAINMENT AND INTEGRITY ASSESSMENTS

IV.C.1. The Permittee shall perform a tank integrity test, once every three calendar years, at least 30 months apart, on each of the hazardous waste tanks. Written documentation of this test shall be placed in the Operating Record.

IV.C.2. Integrity testing that is performed under the direction of an independent Utah-registered professional engineer may be used in lieu of the hydrostatic testing requirements listed in Condition II.F.4. This test may be any test that has been accepted by the industry as a standard test to assess tightness. Documentation of such alternative test methods and results shall be placed in the Operating Record.

IV.C.3. The Permittee shall design, construct, operate, and maintain secondary containment systems for each tank or tank system in accordance with Attachment IV-1, *Tank Management Plan*.

IV.D. INSTALLATION REQUIREMENTS

IV.D.1. The Permittee shall perform tank assessments on each new tank prior to use at the facility. This assessment shall include an evaluation by an independent Utah registered professional engineer attesting that the tank has sufficient structural integrity and is acceptable for treating hazardous waste.

IV.D.2. The Permittee shall ensure that proper tank handling procedures are followed in order to prevent damage to the tank system during installation. The Permittee shall have an independent, qualified, Utah registered professional engineer or a qualified, independent, tank installation inspector, certify that the tank was installed according to proper tank handling and installation procedures. The individual performing the certification shall inspect the tank for structural damage that may have occurred during installation. The Permittee shall provide a copy of the certification to the Executive Secretary along with the results of tank testing and the as-built drawings for the tank.

IV.D.3. The Permittee shall have the tank and its ancillary equipment tested for tightness by a Utah registered professional engineer, prior to being placed into use, to assure that the tank's integrity has been preserved.

IV.D.4. The Permittee shall keep written installation certifications on file in the Operating Record in accordance with UAC R315-8-10.

IV.E. OPERATING REQUIREMENTS

IV.E.1. Prior to initial or start up operation of mixing devices for stabilization, the Permittee shall perform an effectiveness test on the mixing device in accordance with Attachment IV-2, *Mixer Effectiveness Plan*. The results of the test shall be submitted to the Executive Secretary for review and approval. Minimum mixing for treatment batches shall be based on the results of the mixer effectiveness test. The Permittee may modify the minimum mixing times for each mixer by performing a new effectiveness test and receiving Executive Secretary approval in writing.

IV.E.2. The Permittee shall not place hazardous wastes or treatment reagents in any tank system if it is known that the material could cause the tank, its ancillary equipment, or a containment system to rupture, leak, corrode, or otherwise fail in accordance with UAC R315-8-10.

IV.E.3. The Permittee shall prevent spills and overflows from the tank or containment systems in accordance with Attachment IV-1, *Tank Management Plan*.

IV.F. RESPONSE TO LEAKS OR SPILLS

IV.F.1. In the event of a leak or spill from a tank system or from a secondary containment system, the Permittee shall comply with the requirements of Attachment II-6, *Contingency Plan*. If either of the above situations occur, or if a system becomes unfit for use, the Permittee shall, in addition to the contingency measures, remove the system from service immediately and complete the following actions in accordance with UAC R315-8-10:

IV.F.1.a. In the event of a leak, the following measures, in addition to Attachment II-6, *Contingency Plan*, shall be employed:

IV.F.1.a.i. Stop the flow of hazardous waste into the tank system and inspect it to determine the cause of the leak.

IV.F.1.a.ii. Remove waste and accumulated precipitation from the system within 24 hours of leak detection to prevent further leakage and allow for inspection and repair of the system. The Permittee may request an extension of the

24-hour limitation from the Executive Secretary. Executive Secretary approval may be granted verbally, followed by written approval within 15 days.

IV.F.1.a.iii. Manage the collected material as hazardous waste, unless the Permittee can demonstrate to the Executive Secretary, that it is not a hazardous waste.

IV.F.1.b. The Permittee shall immediately conduct a visual inspection of all releases to determine if the environment has been impacted. Based on this inspection, the Permittee shall perform the following actions:

IV.F.1.b.i. Prevent further migration of the leak to soils, surface water, or groundwater; and

IV.F.1.b.ii. Remove and properly dispose of all contamination to the soil, surface water, or groundwater.

IV.F.1.c. The Permittee shall close the tank system in accordance with Attachment II-7, *Closure Plan*, unless repairs to the tank system occur that provide secondary containment as necessary.

IV.F.2. Replaced components of a tank system shall satisfy the requirements for new tank systems in accordance with Condition IV.D.

IV.F.3. All major repairs that are required to eliminate leaks or affect the integrity of the tank system, shall be certified by an independent, qualified, Utah registered professional engineer. The Executive Secretary shall determine if a repair is a major repair and thereby requires certification.

IV.F.4. In the event of a spill, the following measures, in addition to Attachment II-6, *Contingency Plan*, shall be employed:

IV.F.4.a. Spills that have not damaged the integrity of the tank system shall be contained, and the spilled waste removed, before returning the tank system to service;

IV.F.4.b. The collected material shall be managed as a hazardous waste, unless the Permittee can demonstrate to the Executive Secretary, that it is not a hazardous waste; and

IV.F.4.c. The Permittee shall immediately conduct a visual inspection of the spill to determine if the environment has been impacted. Based on the inspection, the Permittee shall perform the following actions:

IV.F.4.c.i. Prevent further migration of the spill to soils, surface water, or groundwater, and

IV.F.4.c.ii. Remove and properly dispose of all contamination to the soil, surface water, or groundwater.

IV.G. INSPECTION SCHEDULES AND PROCEDURES

IV.G.1. The Permittee shall inspect the tank systems, in accordance with Attachment II-3, *Site Inspection Plan.*

IV.H. RECORDKEEPING AND REPORTING

IV.H.1. Leaks or spills from tanks, tank systems, or secondary containment systems to the environment shall be reported to the Executive Secretary within 24 hours of discovery.

IV.H.2. A leak or spill of one pound or less of waste not identified as an acute hazardous waste, that is immediately contained and cleaned up, need not be reported.

IV.H.3. The Permittee shall implement Attachment II-6, *Contingency Plan* in the event of a leak or spill containing acute hazardous waste.

IV.H.4. A leak or spill from a liquid storage tank that is contained within a secondary containment system shall be reported to the Executive Secretary within 24 hours of detection. Reports to the Executive Secretary shall be submitted via letter or facsimile.

IV.H.5. Within 30 days of detecting a release to the environment from a tank system or secondary containment system, the Permittee shall report the following information to the Executive Secretary:

IV.H.5.a. Likely route of migration of the release;

IV.H.5.b. Characteristics of the surrounding soil (including soil composition, geology, hydrogeology, and climate);

IV.H.5.c. Results of any monitoring or sampling conducted in connection with the release. If the Permittee finds it will be impossible to meet this time period, the Permittee shall provide the Executive Secretary with a schedule of when the results will be available. This schedule shall be provided before the required 30-day submittal period expires;

IV.H.5.d. Proximity of down-gradient drinking water wells, surface water, and populated areas; and

IV.H.5.e. A description of response actions taken or planned.

IV.H.6. The Permittee shall submit to the Executive Secretary all certifications, by a qualified Utah registered professional engineer, of major repairs within seven days of returning the tank system to use.

IV.H.7. The Permittee shall obtain, and keep on file in the Operating Record, the written statements by those persons required to certify the design and installation of the tank system.

IV.H.8. The Permittee shall keep on file in the Operating Record, the written tank assessment.

IV.H.9. The Permittee shall maintain in the Operating Record, a record of the results of integrity tests conducted on permitted tanks, in accordance with Condition IV.C.1. These records shall be kept for a minimum of three years.

IV.I. CLOSURE AND POST-CLOSURE CARE

IV.I.1. At closure of the tank system, the Permittee shall follow the procedures in Attachment II-7, *Closure Plan*.

IV.I.2. If the Permittee can not demonstrate that all contaminated soils have been removed or remediated, in accordance with Attachment II-7, *Closure Plan*, then the Permittee shall close the areas of contamination as landfills and perform post-closure care following the requirements of UAC R315-8-7.

IV.J. SPECIAL TANK PROVISIONS FOR IGNITABLE OR REACTIVE WASTES

IV.J.1. The Permittee shall not place ignitable or reactive waste in the evaporation tank systems or in their secondary containment systems. Ignitable or reactive waste may be treated in the Mixed Waste Treatment Facility tanks in accordance with the provisions of this Permit.

IV.K. SPECIAL TANK PROVISIONS FOR INCOMPATIBLE WASTES

IV.K.1. The Permittee shall not place incompatible wastes, or incompatible wastes and materials, in the same tank system or the same secondary containment system.

IV.K.2. The Permittee shall follow the procedures for tank decontamination outlined in Attachment II-1-3, *Waste Stabilization Plan*, and Attachment II-1-6, *Leachate, Evaporation, and Decontamination Waste Management Plan*.

TABLE IV-1
TANK FEATURES

General Classification	Tank Number	Tank Capacity (Gallons)	Tank Dimensions (Nominal)
Evaporation Tank 1 (East) Near Landfill	Tank 0125	21,000	35'Lx8'Wx10'H
Evaporation Tank 2 (West) Near Landfill	Tank 0150	21,000	35'Lx8'Wx10'H
Evaporation Tank 3 Near Treatment Facility	Tank 0175	21,000	35'Lx8'Wx10'H
Evaporation Tank 4 Near Treatment Facility	Tank 0200	21,000	35'Lx8'Wx10'H
Evaporation Tank 5 North of Western Storage Pad	Tank 0225	121,000	60'Dx6'H
Evaporation Tank 6 North of Western Storage Pad	Tank 0250	121,000	60'Dx6'H
Decontamination Pad Tank System	Tank 0275	4,990	24'6∀Lx7'Wx4'10∀H
Waste Receiver Tank	Tank 1	9,750	30'x15'x3'
Grizzly Tank	Tank 2	900	13'x10'x2'
Wash/Sump Tank	Tank 3	1,530	4'x4'x6'+13'x10'x2'
Sizing Screen Tank	Tank 4	900	13'x10'x2'
Secondary/Tertiary Shredder Tank	Tank 5	1,180	13'x13'x2'

Primary Shredder Tank	Tank 6	1,460	13'x16'x2'
Mixer Tank No. 1	Tank 8	3,142	14'x25' with a 15.5'access ramp that tapers from 14' to 10'
Small-Scale Mixer (Portable)	Tank 10		
Drum Crusher	Tank 11		
Thermal Desorption Dryer	Tank 12	550	
Thermal Desorption Condensate Tanks	Tanks 13, 14, and 15	650 (each)	4.5’Dx6’H (each)